

### **AMENDMENTS TO THE CLAIMS**

Claims 1-4, 6, 9-14, 16, 19-24, 26, 29-39 are pending in the instant application. Claims 1, 11, 21 and 31-39 have been amended. The Applicant requests reconsideration of the claims in view of the following amendments reflected in the listing of claims.

Listing of claims:

1. (Currently Amended) A method for providing and configuring Ethernet communication links of a device, the method comprising:

determining any one usable media pair from at least three media pairs of all existing media pairs, wherein each of said media pairs ~~each comprise~~comprises a twisted pair;

selecting any one channel from all existing channels corresponding to all existing media pairs; and

assigning said selected any one channel to said any one usable media pair, wherein the device communicates using said at least three media pairs of said all existing media pairs.

2. (Previously Presented) The method according to claim 1, wherein said determining comprises monitoring at least said any one usable media pair.

3. (Previously Presented) The method according to claim 2, wherein said monitoring comprises detecting an existence of a communication signal on said any one usable media pair.

4. (Previously Presented) The method according to claim 1, comprising determining which one of said all existing media pairs facilitates communication at a maximum communication speed.

5. (Canceled)

6. (Previously Presented) The method according to claim 1, comprising determining which one of said all existing media pairs facilitates operating at a reduced communication speed.

7-8. (Canceled)

9. (Previously Presented) The method according to claim 1, comprising identifying a status of at least one of said all existing media pairs and at least one of said all existing channels.

10. (Previously Presented) The method according to claim 9, comprising storing said identified status.

11. (Currently Amended) A non-transitory machine-readable storage having stored thereon, a program having at least one code section for providing and configuring Ethernet communication links of a device, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining any one usable media pair from at least three media pairs of all existing media pairs, wherein said each of media pairs ~~each comprise~~comprises a twisted pair;

selecting any one channel from all existing channels corresponding to all existing media pairs; and

assigning said selected any one channel to said any one usable media pair, wherein the device communicates using said at least three media pairs of said all existing media pairs.

12. (Previously Presented) The machine-readable storage according to claim 11, wherein said at least one code section comprises code for monitoring at least said any one usable media pair.

13. (Previously Presented) The machine-readable storage according to claim 12, wherein said at least one code section comprises code for detecting an existence of a communication signal on said any one usable media pair.

14. (Previously Presented) The machine-readable storage according to claim 11, wherein said at least one code section comprises code for determining which one of said all existing media pairs facilitates communication at a maximum communication speed.

15. (Canceled)

16. (Previously Presented) The machine-readable storage according to claim 11, wherein said at least one code section comprises code for determining which one of said all existing media pairs operates communication at a reduced communication speed.

17-18. (Canceled)

19. (Previously Presented) The machine-readable storage according to claim 11, wherein said at least one code section comprises code for identifying a

status of at least one of said all existing media pairs and at least one of said all existing channels.

20. (Previously Presented) The machine-readable storage according to claim 19, wherein said at least one code section comprises code for storing said identified status.

21. (Currently Amended) A system for providing and configuring Ethernet communication links, the system comprising:

at least one controller enabled to determine any one usable media pair from at least three media pairs of all existing media pairs, wherein said each of media pairs ~~each comprise~~comprises a twisted pair;

at least one selector enabled to select any one channel from all existing channels corresponding to all existing media pairs; and

said at least one controller enabled to assign said selected any one channel to said any one usable media pair, wherein said at least one controller communicates using said at least three media pairs of said all existing media pairs.

22. (Previously Presented) The system according to claim 21, wherein said at least one controller is enabled to determine at least said any one usable media pair.

23. (Previously Presented) The system according to claim 22, wherein said at least one controller comprises a detector enabled to detect an existence of a communication signal on said any one usable media pair.

24. (Previously Presented) The system according to claim 21, wherein said at least one controller is enabled to determine which one of said all existing media pairs facilitates communication at a maximum communication speed.

25. (Canceled)

26. (Previously Presented) The system according to claim 21, wherein said at least one controller is enabled to determine which one of said all existing media pairs operates communication at a reduced communication speed.

27-28. (Canceled)

29. (Previously Presented) The system according to claim 21, wherein said at least one controller is enabled to identify a status of at least one of said all existing media pairs and at least one of said all existing channels.

30. (Previously Presented) The system according to claim 29, comprising at least one register enabled to store said identified status.

31. (Currently Amended) A method for providing and configuring Ethernet communication links of a device, the method comprising:

determining any one usable media pair from at least three media pairs of all existing media pairs, wherein each of said media pairs ~~each comprise~~ comprises a twisted pair;

selecting any one channel from all existing channels corresponding to all existing media pairs;

assigning said selected any one channel to said any one usable media pair;

determining which one of said all existing media pairs facilitates communication at a maximum communication speed; and

cross-connecting said selected any one channel to said one of said all existing media pairs that facilitates communication at a maximum communication speed, wherein the device communicates using said at least three media pairs of said all existing media pairs.

32. (Currently Amended) A method for providing and configuring Ethernet communication links of a device, the method comprising:

determining any one usable media pair from at least three media pairs of all existing media pairs, wherein each of said media pairs ~~each comprise~~comprises a twisted pair;

selecting any one channel from all existing channels corresponding to all existing media pairs;

assigning said selected any one channel to said any one usable media pair;

determining which one of said all existing media pairs facilitates operating at a reduced communication speed; and

cross-connecting said selected any one channel to said one of said all existing media pairs that facilitates operating at said reduced communication speed, wherein the device communicates using said at least three media pairs of said all existing media pairs.

33. (Currently Amended) A method for providing and configuring Ethernet communication links of a device, the method comprising:

determining any one usable media pair from all existing media pairs, wherein each of said media pairs ~~each comprise~~comprises a twisted pair;



selecting any one channel from all existing channels corresponding to all existing media pairs;

assigning said selected any one channel to said any one usable media pair;

flipping one or both of a channel and a media pair assignment of a previously defined general channel and media pair configuration which defines channel and media pair assignments for at least a portion of said all existing media pairs; and

defining said flipped one or both of a channel and a media pair assignment as a default channel and media pair configuration, wherein the device communicates using at least three media pairs of said all existing media pairs.

34. (Currently Amended) A non-transitory machine-readable storage having stored thereon, a program having at least one code section for providing and configuring Ethernet communication links of a device, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining any one usable media pair from at least three media pairs of all existing media pairs, wherein each of said media pairs ~~each comprise~~comprises a twisted pair;

selecting any one channel from all existing channels corresponding to all existing media pairs;

assigning said selected any one channel to said any one usable media pair;  
determining which one of said all existing media pairs facilitates communication at a maximum communication speed; and

cross-connecting said selected any one channel to said one of said all existing media pairs that facilitates communication at a maximum communication speed, wherein the device communicates using said at least three media pairs of said all existing media pairs.

35. (Currently Amended) A non-transitory machine-readable storage having stored thereon, a program having at least one code section for providing and configuring Ethernet communication links of a device, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining any one usable media pair from at least three media pairs of all existing media pairs, wherein each of said media pairs ~~each comprise~~comprises a twisted pair;

selecting any one channel from all existing channels corresponding to all existing media pairs;

assigning said selected any one channel to said any one usable media pair;

determining which one of said all existing media pairs operates communication at a reduced communication speed; and

cross-connecting said selected any one channel to said one of said all existing media pairs that operates communication at said reduced communication speed, wherein the device communicates using said at least three media pairs of said all existing media pairs.

36. (Currently Amended) A non-transitory machine-readable storage having stored thereon, a program having at least one code section for providing and configuring Ethernet communication links of a device, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

determining any one usable media pair from all existing media pairs, wherein each of said media pairs ~~each comprise~~ comprises a twisted pair;

selecting any one channel from all existing channels corresponding to all existing media pairs;

assigning said selected any one channel to said any one usable media pair;

flipping one or both of a channel and a media pair assignment of a previously defined general channel and media pair configuration which defines channel and media pair assignments for at least a portion of said all existing media pairs; and

defining said flipped one or both of said channel and said media pair assignment as a default channel and media pair configuration, wherein the device communicates using at least three media pairs of said all existing media pairs.

37. (Currently Amended) A system for providing and configuring Ethernet communication links, the system comprising:

at least one controller enabled to determine any one usable media pair from at least three media pairs of all existing media pairs, wherein each of said media pairs ~~each comprise~~comprises a twisted pair;

at least one selector enabled to select any one channel from all existing channels corresponding to all existing media pairs; and

said at least one controller enabled to assign said selected any one channel to said any one usable media pair,

wherein said at least one controller communicates using said at least three media pairs of said all existing media pairs,

wherein said at least one controller is enabled to determine which one of said all existing media pairs facilitates communication at a maximum communication speed, and

wherein said selector is enabled to cross-connect said selected any one channel to said one of said all existing media pairs that facilitates communication at a maximum communication speed.

38. (Currently Amended) A system for providing and configuring Ethernet communication links, the system comprising:

at least one controller enabled to determine any one usable media pair from at least three media pairs of all existing media pairs, wherein each of said media pairs ~~each comprise~~comprises a twisted pair;

at least one selector enabled to select any one channel from all existing channels corresponding to all existing media pairs; and

said at least one controller enabled to assign said selected any one channel to said any one usable media pair,

wherein said at least one controller communicates using said at least three media pairs of said all existing media pairs,

wherein said at least one controller is enabled to determine which one of said all existing media pairs operates communication at a reduced communication speed, and

wherein said selector is enabled to cross-connect said selected any one channel to said one of said all existing media pairs that operates communication at said reduced communication speed.

39. (Currently Amended) A system for providing and configuring Ethernet communication links, the system comprising:

at least one controller enabled to determine any one usable media pair from all existing media pairs, wherein each of said media pairs ~~each comprise~~ comprises a twisted pair;

at least one selector enabled to select any one channel from all existing channels corresponding to all existing media pairs; and

said at least one controller enabled to assign said selected any one channel to said any one usable media pair,

wherein said at least one controller communicates using at least three media pairs of said all existing media pairs,

wherein said selector is enabled to flip one or both of a channel and a media pair assignment of a previously defined general channel and media pair configuration which defines channel and media pair assignments for at least a portion of said all existing media pairs, and

said controller is enabled to define said flipped one or both of said channel and said media pair assignment as a default channel and media pair configuration.